CLAIMS

What is claimed is:

1. A method of identifying the presence or absence of an agglomeration complex from a sample matrix obtained from an individual comprising the following steps:

(a) forming an admixture of said sample matrix with one or more nucleic acids, wherein said one or more nucleic acids are obtained from a nucleotide antibody library;

(b) incubating said admixture of step (a) under conditions suitable to form at least one agglomeration complex, wherein said agglomeration complex is represented by the following formula:

$$[A_x B_y C_z]$$

wherein A represents a protein and x is an integer having a value from one to infinity, B is a cellular binding cofactor, wherein said binding cofactor participates in the formation of the complex, and y is an integer having a value from 1 to infinity, and C is a nucleic acid selected from said library of nucleic acid antibodies and z is an integer having a value from 1 to infinity, wherein at least one of the groups consisting of A and B are present in said sample matrix, and the complex represented in brackets does not imply any order in A, B, or C, and A, B and C form an agglomeration complex through non-covalent bonds;

(c) detecting said agglomeration complex.

2. The method of claim 1, wherein said agglomeration complex exhibits decreased solubility in which said sample matrix is obtained from an individual affected with a prion-based disease.

3. The method of claim 1, wherein said agglomeration complex exhibits increased stability in the presence of proteolytic enzymes.

4. The method of claim 3, wherein said proteolytic enzyme is protease K.

5. The method of claim 1, wherein said agglomeration complex is isolated from said sample matrix to form an isolation product.

6. The method of claim 5, wherein said agglomeration complex is separated into components A, B and C.

7. The method of claim 6, wherein said components A, B, and C are identified and compared to components derived from a second sample matrix obtained from a second individual who is unaffected by a prion-based disease.

8. The method of claim 1, wherein said nucleotide antibody library is derived from naturally occurring NA.

9. The method of claim 1, wherein said nucleotide antibody library is derived from non-naturally occurring NA.

10. The method of claim 9, wherein said nucleotide antibody library comprises RQ11+12, MDV, MNV, MNV-AP1, MNVUP, MNVLO RNA, and combinations thereof.

11. The method of claim 1, wherein said nucleotide antibody library is derived from an individual exhibiting symptoms of a prion-based disease.

12. The method of claim 1, wherein said protein has at least two functional conformations, a first active conformation, and a second inactive conformation.

13. The method of claim 1, wherein said cellular binding factor is selected from the family of lipoproteins.

14. The method of claim 1, wherein said cellular binding factor is fibronectin.

15. The method of claim 1, wherein said protein is human recombinant prion protein.

16. A composition associated with an agglomeration complex, wherein said agglomeration complex is represented by the following formula:

$$[A_x B_y C_z]$$

wherein A represents a protein and x is an integer having a value from one to infinity, B is a cellular binding cofactor, wherein said binding cofactor participates in the formation of the complex through non-covalent interactions with macromolecules, and y is an integer having a value from 1 to infinity, and C is a nucleic acid selected from a library of nucleic acid antibodies and z is an integer having a value from 1 to infinity, wherein at least one of the groups consisting of A and B are present in said sample matrix, and wherein the complex represented in brackets does not imply any order in A, B, or C, and A, B and C form a complex through non-covalent bonds and non hybridization affinity.

17. The composition of claim 16, wherein at least one of the group consisting of A and B are present in a sample matrix of an individual exhibiting symptoms of the disease from which the agglomeration complex is associated.

18. The composition of claim 16, wherein said agglomeration complex exhibits decreased solubility in which said sample matrix is obtained from an individual affected with a prion-based disease.

19. The composition of claim 16, wherein A is a prion-protein.

20. The composition of claim 16, wherein said nucleotide antibody library comprises RQ11+12, MDV, MNV, MNV-AP1, MNVUP, MNVLO RNA and combinations thereof.

21. A method for examining the efficacy of a pharmaceutical agent to protect prion protein against protease K digestion, comprising the following steps:

(a) forming an admixture under having

(i) one or more cellular binding factors;

(ii) one or more nucleic acid antibodies, wherein said one or more nucleic acids antibodies are obtained from a nucleotide antibody

library;

(iii) one or more prion proteins; and

(iv) said pharmaceutical agent;

(b) adding to said admixture of step (a) protease K under conditions suitable

for protease digestion of said prion protein;

(c) detecting the presence of said prion protein of step (a), whereby the presence of said prion protein is indicative of a pharmaceutical agent that is effective in protecting said prion protein against protease digestion by protease K.

22. The method of claim 21, wherein said nucleotide antibody library is derived from naturally occurring NA.

23. The method of claim 21, wherein said nucleotide antibody library is derived from non-naturally occurring NA.

24. The method of claim 21, wherein said nucleotide antibody library comprises RQ11+12, MDV, MNV, MNV-AP1, MNVUP, MNVLO RNA, and combinations thereof.

25. The method of claim 21, wherein said cellular binding factor is selected from the

family of lipoproteins.

26. The method of claim 21, wherein said cellular binding factor is fibronectin.

27. The method of claim 21, wherein said prion protein is human recombinant prion protein.

28. The method of claim 21, wherein said pharmaceutical agent is chlorpromazine.

29. A kit for determining whether a test agent can inhibit protein agglomeration, comprising:

(a) a NA antibody;

(b) a CBF; and

(c) a protein.

30. The kit of claim 29, wherein said NA antibody is a nucleotide sequence selected from group consisting of SEQ ID NOS 1-6.

31. The kit of claim 29, wherein said CBF is fibronectin.

32. The kit of claim 29, wherein said protein is a prion protein.

33. The kit of claim 29 further comprising protease K.